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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/728,022

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Gopal K. Chopra

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EXAMINER

MEHTA, PARIKHA SOLANKI

ART UNIT

PAPER NUMBER

3737

MAIL DATE

DELIVERY MODE

03/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/728,022	Applicant(s) CHOPRA, GOPAL K.	
	Examiner PARIKHA S. MEHTA	Art Unit 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,8-13 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,9-13 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 10, 11 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Phan (US Patent No. 6,939,350), hereinafter Phan ('350).

Phan ('350) discloses a method and system for delivering acoustic energy to a target site wherein the system includes a catheter 102, an ultrasound transducer 106 (col. 12 lines 65-67) secured to the catheter, the transducer configured to be placed on a tissue (Fig. 4), the catheter comprising a fluid source 150 in fluid communication with a fluid channel 131 via multiple lumens 116, 118. Phan ('350) also discloses a heat exchanger (col. 10 lines 55-59, "a suitable cooling system").

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 12, 13, 22, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phan ('350) in view of DiLorenzo (US Patent No. 6,366,813), hereinafter DiLorenzo ('813).

5. **Regarding claims 9, 12, 13, 23 and 24**, Phan ('350) substantially teaches all features of the present invention as previously discussed for claim 1. Phan ('350) lacks a neurological sensor distally located adjacent to the transducer. In the same field of endeavor, DiLorenzo ('813) teaches that acoustic sensors are useful for monitoring neurological signals during the application of stimulatory energy (col. 4

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line 65 – col. 5 line 8), and further teaches such sensors to be embodied adjacent to stimulating elements at the distal end of a catheter (col. 7 lines 51-60). It would have been obvious to one of ordinary skill in the art at the time of invention to have modified Phan ('350) to include one or more acoustic sensors adjacent the treatment transducer in order to monitor the patient's neurological signals during treatment, in view of the teachings of DiLorenzo ('813).

Regarding claim 22, although neither Phan ('350) nor DiLorenzo ('813) teach administration of a blood thinning agent prior to delivering acoustic energy, Examiner hereby takes Official Notice that it is well known in the art to administer blood thinners such as aspirin or heparin in combination with ultrasound ablation therapy in order to prevent formation or dislodgement of blood clots during the procedure. Accordingly, one of ordinary skill in the art would have found it obvious to perform this step with the method of Phan ('350) and DiLorenzo ('813).

Response to Arguments

6. Applicant's arguments filed 8 January 2009 have been fully considered but they are not persuasive.

Applicant argues that Phan does not disclose how his electrodes and cooling structures would be integrated into or used with catheters, and also argues that the reference does not teach a transducer secured to a catheter that comprises a cooling means (Remarks p. 6). Applicant also suggests that Phan teaches away from the use of the reference cooling system with a catheter (Remarks p. 6). Examiner directs Applicant's attention to col. 5 lines 1-11, wherein the reference explicitly states "the present inventions also include catheter-based probes such as... catheters that support a plurality of longitudinally-spaced electrodes near the distal end of the catheter body in addition to the cooling structures described below in the surgical probe context". A skilled artisan would readily recognize this as a disclosure that the reference shaft could be interchanged for any prior art catheter, including the ones incorporated by reference at lines 10-11 of col. 5, and thereby yield the claimed features. Phan also discloses that "a plurality of spaced electrodes...are employed. However...ultrasonic transducers...may be substituted for the electrodes" (col. 12 lines 65-67). Accordingly, one of ordinary skill would certainly find reasonable motivation and enablement to substitute known ultrasonic transducers for the distal transducers disclosed at col. 5 lines 1-11. Furthermore, the cooling channel must inherently be positioned adjacent the transducer, as the reference cooling system would not otherwise be operable as disclosed.

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Applicant challenges the combination of Phan and DiLorenzo on the purported grounds that Phan teaches away from catheters (Remarks p. 7 paragraph 2). As discussed above, Phan explicitly discloses the use of the cooling system with catheters.

As Applicant's arguments are wholly unpersuasive for at least the foregoing reasons, the previous rejection of all pending claims as unpatentable over Phan and DiLorenzo is maintained and reiterated herein.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARIKHA S. MEHTA whose telephone number is (571)272-3248. The examiner can normally be reached on M-F, 8 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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